

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P634011

Luminaire Tested: GWS-SA2F-830-U-RW-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P634011  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-50)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA2F-830-U-RW-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (32) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

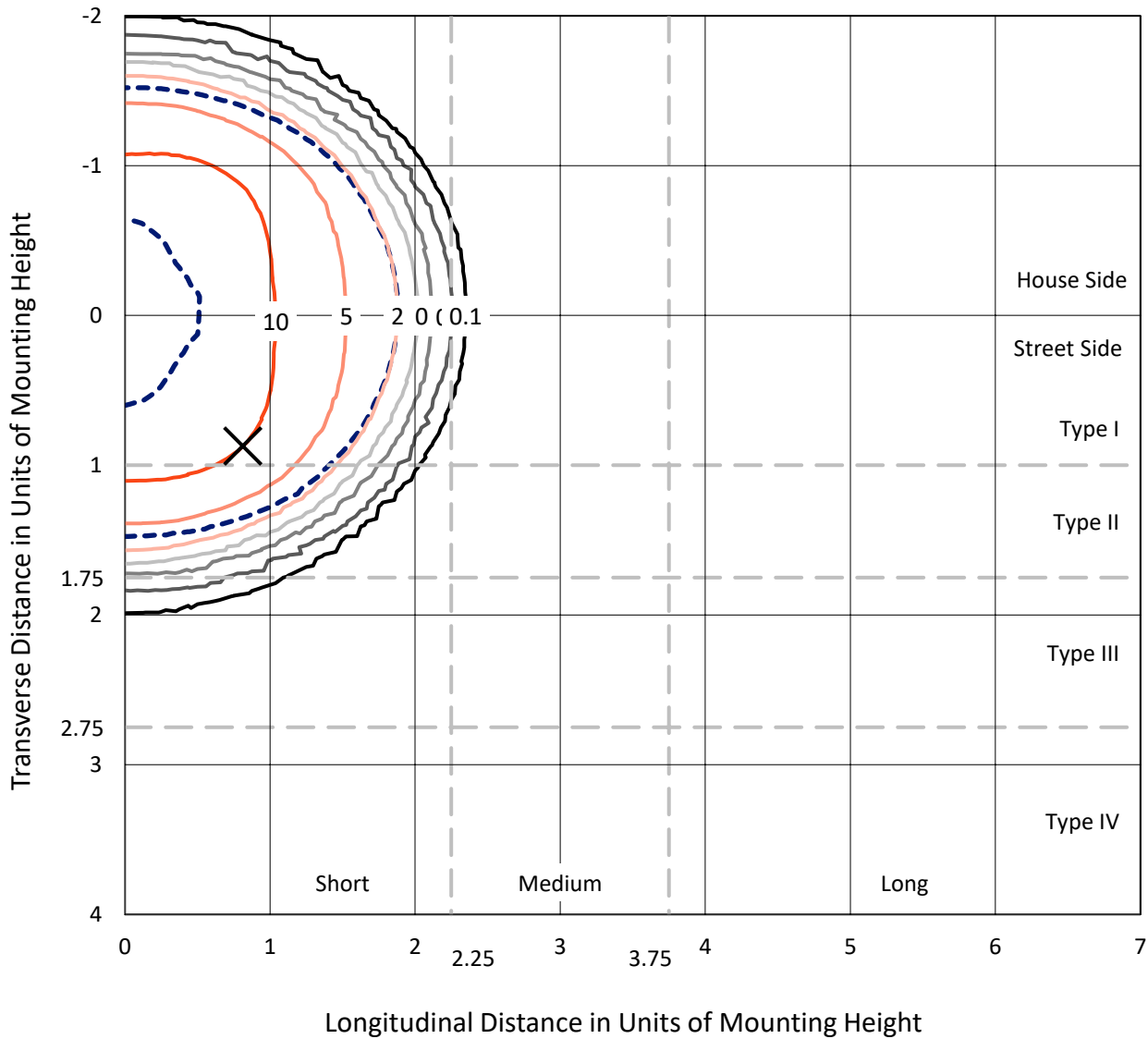
Lumens per Lamp: N/A  
Luminaire Lumens: 8352.4 lumens  
Efficiency: N/A  
Efficacy: 67.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B3 - U0 - G0  
  
Input Watts (W): 124.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 0  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P634011  
 CATALOG NUMBER: GWS-SA2F-830-U-RW-W-GRSBK

### Iso-Footcandle Lines of Horizontal Illumination

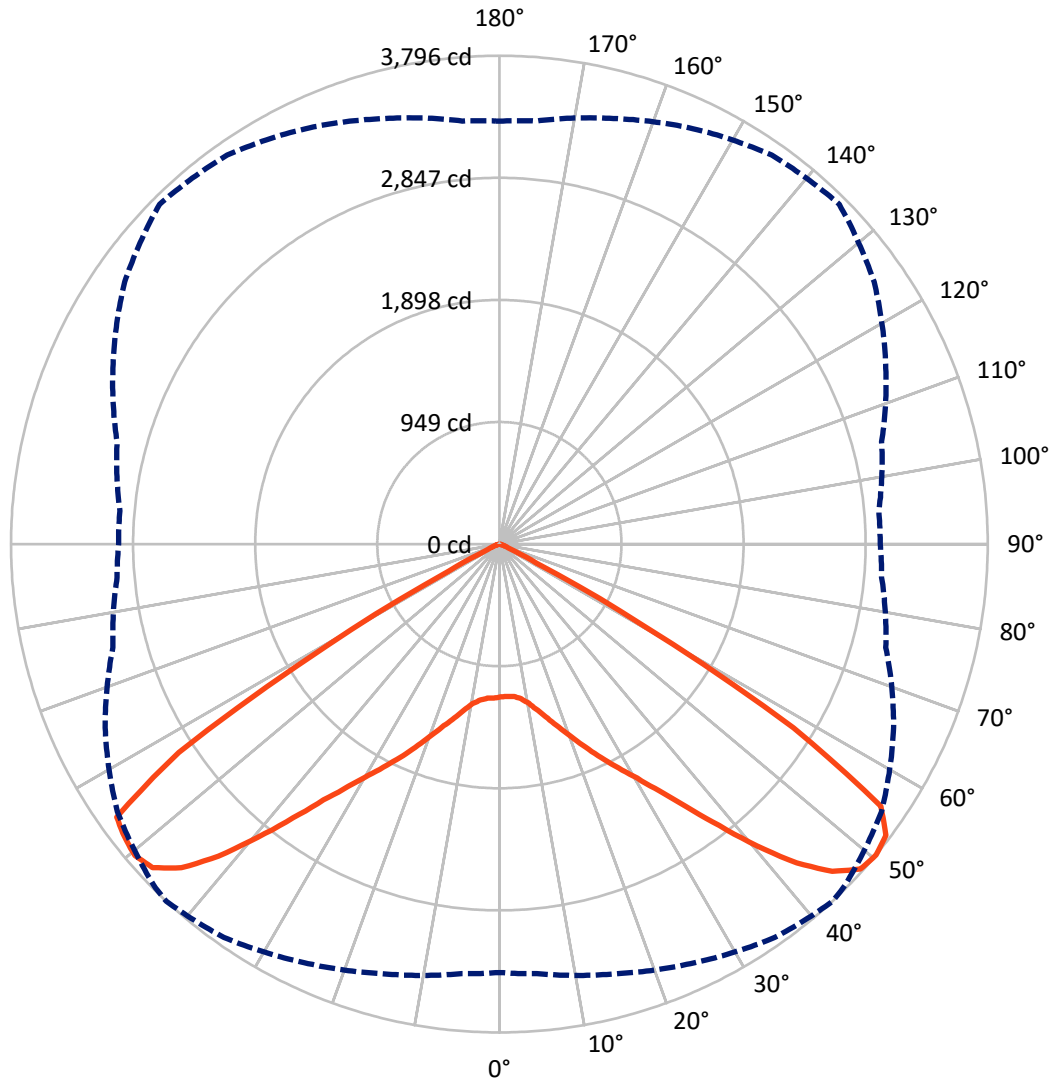
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.2 fc  
 Type V - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 43-Deg Lateral    - - - Horizontal Cone Through 50-Deg Vertical

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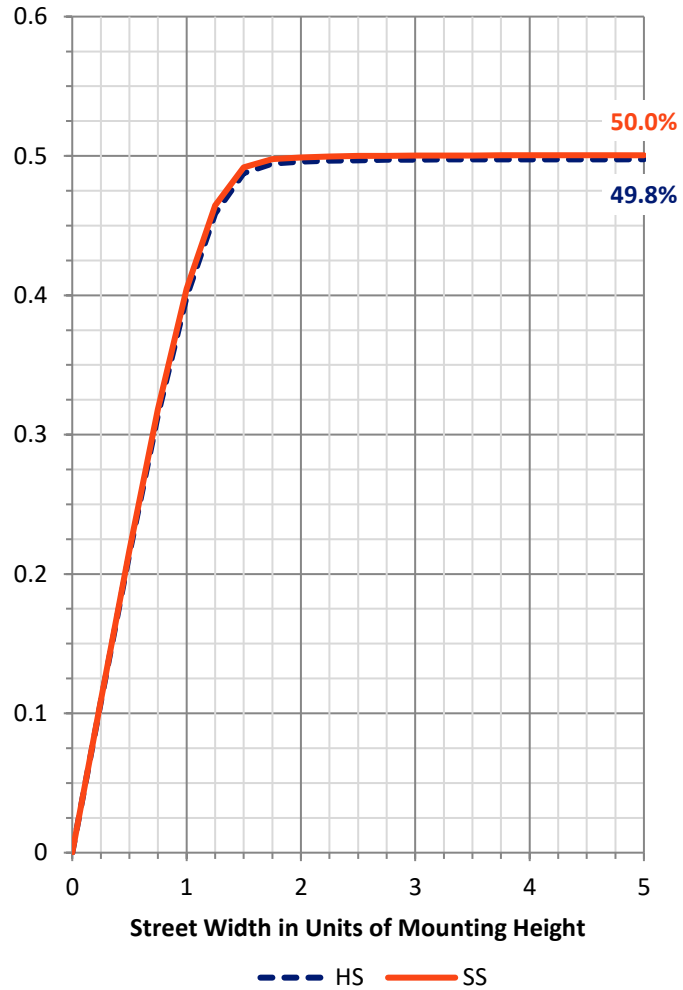
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4176.1	0.0	4176.1
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4176.3	0.0	4176.3
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	8352.4	0.0	8352.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.0	1.4
10°-20°	402.6	4.8
20°-30°	814.5	9.8
30°-40°	1511.2	18.1
40°-50°	2508.5	30.0
50°-60°	2560.1	30.7
60°-70°	419.8	5.0
70°-80°	18.4	0.2
80°-90°	0.2	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	8352.4	100.0
0°-180°	8352.4	100.0

**Coefficient of Utilization**



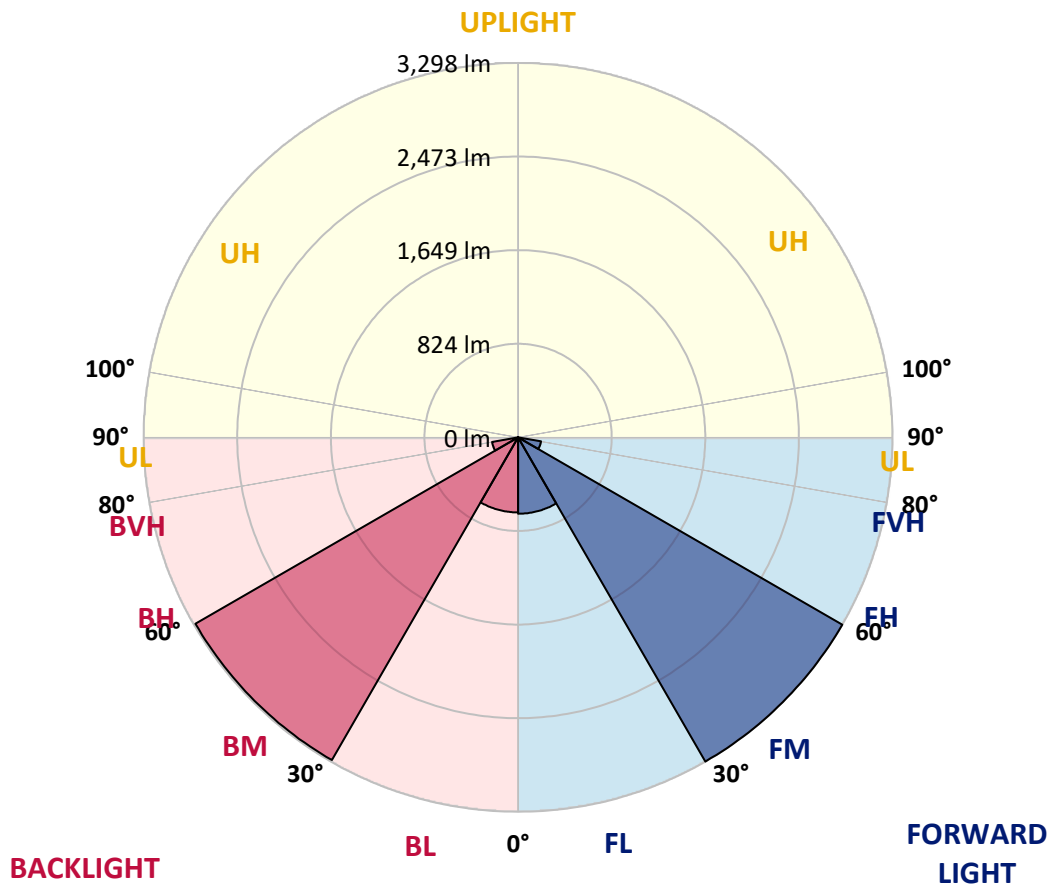
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	672.9	8.1			
FM (30°-60°)	3297.9	39.5			
FH (60°-80°)	205.4	2.5			G0/660
FVH (80°-90°)	0.1	0.0			G0/10
BL (0°-30°)	661.2	7.9	B2/1000		
BM (30°-60°)	3281.9	39.3	B3/5000		
BH (60°-80°)	232.8	2.8	B1/500		G0/660
BVH (80°-90°)	0.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G0**  
 Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	43°	45°	55°	65°	75°	85°
0°	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0
2.5°	1165.8	1168.6	1172.3	1176.0	1180.6	1185.2	1188.0	1196.3	1194.5	1201.9	1201.9
5°	1152.9	1155.7	1160.3	1168.6	1178.8	1188.9	1196.3	1212.9	1222.2	1237.0	1242.5
7.5°	1159.4	1163.1	1168.6	1181.5	1197.2	1212.9	1221.3	1248.0	1266.5	1294.2	1309.9
10°	1180.6	1184.3	1193.5	1215.7	1236.0	1258.2	1268.4	1302.5	1332.1	1370.0	1392.2
12.5°	1204.6	1209.2	1227.7	1261.0	1296.1	1325.6	1339.5	1377.4	1407.9	1450.4	1485.5
15°	1229.6	1237.0	1265.6	1314.6	1364.4	1404.2	1418.9	1459.6	1490.1	1535.3	1575.1
17.5°	1287.8	1296.1	1328.4	1381.1	1449.4	1495.6	1508.6	1551.0	1574.1	1604.6	1646.2
20°	1360.7	1376.5	1416.2	1479.9	1554.7	1599.1	1608.3	1649.9	1648.0	1661.0	1697.0
22.5°	1451.3	1462.4	1505.8	1581.5	1665.6	1714.6	1735.8	1753.4	1730.3	1719.2	1742.3
25°	1545.5	1558.4	1605.6	1688.7	1782.9	1839.3	1856.8	1870.7	1833.7	1792.2	1794.9
27.5°	1667.4	1676.7	1722.9	1811.6	1905.8	1969.5	1985.2	2009.2	1960.3	1893.8	1875.3
30°	1812.5	1821.7	1870.7	1964.0	2057.3	2111.8	2135.8	2165.4	2111.8	2028.6	2007.4
32.5°	1982.5	1991.7	2054.5	2150.6	2227.3	2286.4	2309.5	2340.9	2298.4	2205.1	2181.1
35°	2185.7	2191.2	2265.1	2369.5	2450.8	2508.1	2523.8	2560.8	2513.6	2420.3	2407.4
37.5°	2421.3	2427.7	2508.1	2629.1	2712.3	2776.0	2800.9	2811.1	2753.8	2649.4	2639.3
40°	2679.9	2701.2	2779.7	2909.9	3003.2	3083.6	3105.8	3071.6	2991.2	2849.0	2830.5
42.5°	2949.7	2968.1	3055.9	3197.2	3305.3	3387.5	3388.5	3314.6	3177.8	2981.1	2953.4
45°	3174.2	3181.5	3295.2	3437.4	3570.5	3628.7	3634.2	3500.2	3294.2	3057.8	2998.6
47.5°	3328.4	3340.4	3439.3	3576.0	3722.9	3775.5	3764.5	3597.2	3349.7	3107.6	3009.7
50°	3330.3	3350.6	3457.8	3589.9	3732.1	3795.9	3780.2	3625.0	3381.1	3109.5	2982.9
52.5°	3035.6	3068.8	3243.4	3434.7	3652.7	3761.7	3765.4	3661.0	3369.1	3079.9	2958.9
55°	2290.1	2326.1	2546.0	2872.1	3293.3	3597.2	3649.9	3618.5	3355.2	3092.9	3001.4
57.5°	1212.0	1184.3	1306.2	1629.6	2158.9	2696.5	2850.8	3102.1	3200.9	3108.6	3079.9
60°	264.2	281.8	375.1	505.3	842.5	1268.4	1418.9	1849.4	2361.2	2588.5	2752.9
62.5°	113.6	111.8	116.4	132.1	193.1	321.5	392.6	641.1	1011.6	1389.4	1645.3
65°	93.3	94.2	97.9	97.9	91.5	92.4	97.0	146.9	236.5	331.6	445.3
67.5°	70.2	71.1	77.6	79.4	74.8	66.5	65.6	55.4	58.2	73.0	75.8
70°	44.3	44.3	48.0	49.9	49.9	46.2	45.3	39.7	38.8	44.3	49.9
72.5°	24.0	24.0	25.9	26.8	25.9	24.9	24.9	24.0	23.1	26.8	34.2
75°	10.2	10.2	11.1	11.1	10.2	10.2	10.2	10.2	10.2	12.0	18.5
77.5°	1.8	2.8	3.7	2.8	1.8	1.8	1.8	2.8	2.8	3.7	5.5
80°	0.9	0.9	1.8	0.9	0.0	0.0	0.0	0.0	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: GWS-SA2F-830-U-RW-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0	1188.0
2.5°	1208.3	1198.2	1201.9	1203.7	1200.9	1199.1	1188.9	1186.1	1181.5	1174.1	1172.3
5°	1249.0	1240.7	1239.7	1234.2	1221.3	1205.5	1186.1	1177.8	1168.6	1159.4	1157.5
7.5°	1317.3	1307.2	1300.7	1282.2	1252.7	1227.7	1195.4	1177.8	1165.8	1153.8	1151.0
10°	1405.1	1393.1	1374.6	1340.4	1300.7	1264.7	1226.8	1203.7	1185.2	1168.6	1167.7
12.5°	1498.4	1485.5	1452.2	1408.8	1360.7	1327.5	1279.5	1247.1	1219.4	1194.5	1191.7
15°	1596.3	1580.6	1535.3	1483.6	1439.3	1405.1	1352.4	1300.7	1258.2	1222.2	1218.5
17.5°	1671.1	1651.7	1598.2	1559.4	1523.3	1488.2	1429.1	1360.7	1304.4	1261.0	1250.8
20°	1718.3	1699.8	1649.0	1627.7	1611.1	1586.2	1515.9	1444.8	1382.0	1328.4	1319.2
22.5°	1763.5	1741.3	1697.0	1697.0	1709.9	1699.8	1624.0	1542.7	1468.8	1406.9	1393.1
25°	1814.3	1796.8	1765.4	1791.2	1823.6	1822.6	1745.0	1643.4	1558.4	1489.2	1475.3
27.5°	1888.2	1870.7	1859.6	1908.6	1949.2	1946.4	1861.4	1751.5	1661.9	1593.5	1580.6
30°	2018.5	2001.9	1989.8	2049.0	2100.7	2081.3	1988.0	1881.8	1791.2	1713.6	1704.4
32.5°	2192.2	2174.6	2158.9	2218.0	2264.2	2239.3	2150.6	2050.8	1946.4	1870.7	1852.2
35°	2420.3	2383.4	2367.7	2437.9	2457.3	2429.6	2344.6	2256.8	2146.0	2059.1	2047.1
37.5°	2655.9	2612.5	2601.4	2662.4	2693.8	2683.6	2583.8	2492.4	2372.3	2276.2	2262.4
40°	2857.3	2817.6	2798.2	2893.3	2964.4	2970.9	2881.3	2769.5	2628.2	2528.4	2503.5
42.5°	2975.5	2941.4	2936.7	3084.5	3200.9	3284.1	3176.9	3061.4	2912.7	2800.0	2779.7
45°	3002.3	2980.2	3019.0	3212.9	3394.0	3545.5	3454.1	3332.1	3171.4	3052.2	3032.8
47.5°	2999.6	2992.2	3061.4	3279.5	3508.6	3695.2	3649.9	3512.3	3357.1	3232.3	3213.9
50°	2959.8	2960.8	3076.2	3312.7	3554.8	3735.8	3690.5	3563.1	3424.5	3301.6	3286.9
52.5°	2944.1	2938.6	3048.5	3302.6	3601.9	3717.3	3615.7	3472.5	3318.3	3166.8	3144.6
55°	2999.6	2985.7	3052.2	3294.2	3607.4	3707.2	3439.3	3128.9	2812.9	2633.7	2619.0
57.5°	3082.7	3067.9	3099.3	3233.3	3318.3	3082.7	2531.2	2030.5	1705.3	1567.7	1507.6
60°	2752.9	2742.7	2718.7	2557.1	2193.1	1654.5	1127.0	718.7	516.4	417.6	417.6
62.5°	1708.1	1694.2	1564.0	1162.1	844.3	488.7	268.8	168.1	127.5	119.2	118.2
65°	479.4	476.7	394.5	279.0	177.4	109.9	97.0	98.8	97.0	94.2	93.3
67.5°	72.1	79.4	79.4	64.7	61.9	69.3	81.3	86.8	82.2	77.6	75.8
70°	46.2	49.9	48.0	41.6	44.3	51.7	58.2	59.1	56.4	51.7	50.8
72.5°	32.3	36.0	29.6	26.8	27.7	30.5	33.3	33.3	32.3	30.5	28.6
75°	19.4	19.4	13.9	12.9	12.9	13.9	13.9	15.7	15.7	14.8	13.9
77.5°	6.5	7.4	4.6	3.7	3.7	3.7	4.6	5.5	5.5	4.6	3.7
80°	0.9	1.8	0.9	0.9	0.9	0.9	0.9	0.9	1.8	1.8	0.9
82.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2408-195-9  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 08/07/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: MCGRAW EDISON  
 Catalog Number: **GALN-SB1A-830-U-5WQ**  
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

**Spectral Parameters**

CCT (K): 3050  
 CIE u': 0.2476  
 CIE v': 0.5251  
 Duv: 0.0034  
 CIE x: 0.4383  
 CIE y: 0.4131  
 CIE z: 0.1487  
 Peak Wavelength (nm): 603  
 Dominant Wavelength (nm): 581  
 Purity: 55.55201  
 Rf: 81.5  
 Rg: 99.2

CRI (Ra):	81.0		
R1:	79.6	R9:	7.1
R2:	85.6	R10:	67.0
R3:	92.0	R11:	82.7
R4:	82.6	R12:	63.2
R5:	78.9	R13:	80.3
R6:	81.7	R14:	95.0
R7:	85.2	R15:	71.7
R8:	62.0		



**Test Conditions**

Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.27**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

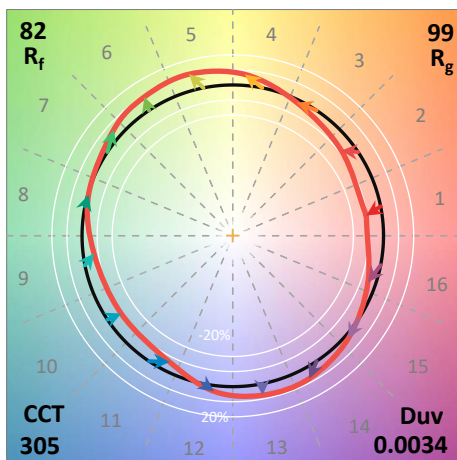
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

**Summary**

$R_f = 81.5$   
 $R_g = 99.2$   
 $CIE R_a = 81.0$   
 $R_9 = 7.1$



**Color Vector Graphics**





**Individual Sample Fidelity Index ( $R_{f,i}$ )**

CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)